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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,684	12/18/2000	Mark J. Foster	AGLE0007	4597

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GLENN PATENT GROUP
3475 EDISON WAY, SUITE L
MENLO PARK, CA 94025

EXAMINER	
CZEKAJ, DAVID J	

ART UNIT	PAPER NUMBER
2613	3

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/740,684	FOSTER ET AL.	
	Examiner	Art Unit	
	Dave Czekaj	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 31-36 is/are allowed.

6)☒ Claim(s) 1-21 and 23-30 is/are rejected.

7)☒ Claim(s) 22 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 31 January 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In figure 4d, the examiner understood "CTU 40" to be "CPU 40".

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities:

On page 11, the description for figures 4e and 6e cannot be found. Also, the examiner notes the description for figure 7, but realizes there is no figure 7--there are figures 7a and 7b.

On page 16, lines 5, 6, and 8, the examiner understood "PN 100" to be "PN 10" (as depicted in the corresponding figure).

On page 19, line 8, the examiner could not find the "switched network 2" in the corresponding figure.

On page 19, line 5, the examiner understood "R1-R4 and C1-C4" to be "R0-R3 and C0-C3".

On page 24, line 6, the examiner understood "CP 400" to be "CPN 400".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-21 and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis (6163795) in view of Reitmeier (6122400).

Regarding claims 1, 13, and 18, Kikinis discloses an apparatus for providing customers selected video information in a timely manner (Kikinis: column 1, lines 18-21). This apparatus comprises "receiving a request for video content from a remote client" (Kikinis: figure 2, item 52, wherein the remote client is the local subscriber), "establishing an application session on a first processor" (Kikinis: wherein figure 2 illustrates an application session or set of processes to be executed upon request by the client), and within the first processor "accessing a video content source to retrieve the requested video content" (Kikinis: figure 2, items 58 and 66). Kikinis further discloses "outputting the data stream of compressed video content to the remote client (Kikinis: figure 2, items 60 and 68, wherein the information is transmitted or outputted to the client or subscriber, column 6, lines 57-59, wherein the information is compressed using a MPEG compression scheme). However, this apparatus lacks the spatially and temporally compressed frames produced by two processors as claimed. Reitmeier teaches that compression encoders using luminance signal detail analysis may inaccurately display flesh-tome and other chrominance aspects of a

picture (Reitmeier: column 1, lines 49-64). To fix this problem, Reitmeier discloses an apparatus that comprises a "first processor that compresses the retrieved video content to create a spatially compressed frame or content" (Reitmeier: figure 1, item 112, wherein the first processor is the DCT and QUANT, blocks 112 and 114, and the DCT produces the spatially compressed frame of content) and "signals to a second processor the existence of the spatially compressed frame of content" (Reitmeier: figure 1, wherein the second processor is comprised of items 132, 130, and 128, and the signaling is the passing of the content from the DCT to the motion compensation processors). Reitmeier further discloses that within the second processor "temporally compressing the spatially compressed frame of video and joining the spatially and temporally compressed frames of content" (Reitmeier: figure 1, wherein the second processor is comprised of items 132, 130, and 128 which temporally compresses the video using B and P frames, and items 106 and 122 are examples of joiners or merges which add the two pieces of video content together). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus discloses by Kikinis and add the compression encoder taught by Reitmeier in order to obtain an apparatus that correctly displays all chrominance aspects of an object. One would be further motivated to do so since Kikinis is silent on the specifics of the compression technique Kikinis discloses.

Regarding claims 2 and 17, although not disclosed, it would have been obvious to communicate combination of a unique channel and program identifier that carries the data steam of compressed video content to the remote client (Official Notice). Doing so would have been obvious in order to correctly distribute the video content to the appropriate clients.

Regarding claim 3, Reitmeier discloses "at least one spatially compressed frame of video comprises an MPEG2 I-frame" (Reitmeier: figure 2, item 112, wherein the DCT is performed on intra or I frames).

Regarding claims 4-5, Reitmeier discloses "the temporally compressed frame of video content comprises and MPEG2 B and P-frame" (Reitmeier: column 5, lines 7-11).

Regarding claim 6, Reitmeier discloses "the data stream of compressed video content comprises an MPEG2 transport stream group of pictures" (Reitmeier: column 4, lines 60-61, wherein the group of pictures is the GOP).

Regarding claim 7, Kikinis discloses "the application session on the first processor comprises an Internet application session" (Kikinis: column 6, lines 40-47, wherein the Internet session is achieved via the ISDN network).

Regarding claim 8, although not disclosed, the Internet application session could comprise an Internet browser application session (Official Notice). Doing so would have been obvious in order to better display information sent to the client.

Regarding claim 9, Kikinis discloses "accessing a switched network to retrieve the requested video content" (Kikinis: column 6, lines 40-47, wherein the switched network is the ISDN network).

Regarding claim 10, Kikinis discloses "the switched network comprises the Internet" (Kikinis: column 6, lines 40-47, wherein the ISDN network provides access to the Internet).

Regarding claim 11, Kikinis discloses "accessing a video-on-demand server to retrieve the requested video content" (Kikinis: column 6, lines 48-55, wherein the video-on-demand server is the file server).

Regarding claim 12, although not disclosed the broadband network could comprise a cable-television residential broadband network (Official Notice). Doing so would have been obvious in order to distribute the video to a plurality of clients at a high speed.

Regarding claim 14, Reitmeier discloses "depositing from the first processor to a memory location the spatially compressed frame of video content and setting an update flag associated with the memory location" (Reitmeier: figure 1, item 124, wherein the memory location is the frame store. One of ordinary skill in the art would realize that upon storing an item in memory, an update flag is set to signal that the item has been successfully stored in the memory).

Regarding claim 15, note the examiners rejection for claim 1, and in addition, Kikinis discloses "rendering a frame of video that contains a display

window with coordinates" (Kikinis: column 14, lines 8-15, wherein the video is transmitted to be displayed on a monitor. One of ordinary skill in the art would realize that in order to correctly display the video, coordinates must be present within the video, otherwise the video would be displayed on a monitor in a random order).

Regarding claim 16, Reitmeier discloses "the data stream of compressed motion video or audio comprises an MPEG2 transport stream" (Reitmeier: column 1, lines 18-19, wherein the transport stream is encompassed in the MPEG2 standard).

Regarding claims 19 and 25, Kikinis discloses that the "first and second processor each belong to at least one processing node within an N^M array of nodes, where N is the number of nodes within a row or column and M is the number of orthogonal dimensions of the array of nodes" (Kikinis: figure 5, wherein the nodes are represented as boxes in columns C1-C4 which are shown in an array format).

Regarding claim 20, Kikinis discloses that "N is at least 4 and M is at least 2" (Kikinis: figure 5, wherein the array show is a 4x4 array, i.e., N=4, M=4).

Regarding claim 21, Kikinis discloses that "each of the processing nodes are orthogonally coupled and support bi-directional communications between orthogonal processing nodes" (Kikinis: figure 5, wherein the nodes are shown to be orthogonally coupled, column 8, lines 61-62, wherein the bi-directional communication is the communication between the nodes).

Regarding claim 23, Kikinis discloses that "bi-directional communication between nodes comprises the traversal of the physical transport layer of the processing node" (Kikinis: column 8, lines 61-62, wherein the bi-directional communication is the communication between the nodes. One of ordinary skill in the art would realize that communication over a network comprises the traversal of the transport layer).

Regarding claim 24, Kikinis discloses that "the physical transport layer consists of a physical media selected from the group consisting of: figure-optics, databus, twisted pair, or microwave wave guide" (Kikinis: column 9, lines 52-65, wherein the databus is the bus).

Regarding claim 26, although not disclosed, each processing unit could comprise a bi-directionally coupled dual-CPU within the same package (Official Notice). Doing so would have been obvious in order to complete instructions faster by utilizing a dual-CPU architecture.

Regarding claim 27, Kikinis discloses that the "communications processing unit is bi-directionally coupled to the processing units" (Kikinis: figure 4, wherein the communications processing unit is the client station and the processing unit is the file server).

Regarding claim 28, Kikinis discloses that "at least a portion of the nodes are under program control to access and retrieve through a switched network video content and spatially compress the retrieved content to form spatially compressed frame of content" (Kikinis: figure 5, wherein the nodes are

represented as boxes in columns C1-C4, column 6, lines 40-47, wherein the switched network is the ISDN network, and the spatial compression is the MPEG compression done at the server using a method illustrated by Reitmeier).

Regarding claim 29, Kikinis in view of Reitmeier discloses that "at least a portion of the nodes temporally compress the spatially compressed frames of content to form the plurality of temporally compressed frames and merge the spatially and temporally compressed frames of content to render the stream of compressed frames" (Kikinis: figure 5, wherein the nodes are represented as boxes in columns C1-C4, column 6, lines 40-47, wherein the temporal compression and merging is the MPEG compression done at the server using a method illustrated by Reitmeier).

Regarding claim 30, although not disclosed, it would have been obvious to perform a load balancing function to equally distribute the plurality of remote clients requests across the portion of nodes (Official Notice). Doing so would have been obvious in order to make the system run more efficiently by distributing the workload.

Allowable Subject Matter

4. Claims 31-36 are allowed.

5. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-5422674	06-1995	Hooper et al.
US-6052555	04-2000	Ferguson, Robert
US-5949490	09-1999	Borgwardt et al.
US-6654958	11-2003	Roberts et al.
US-6005561	12-1999	Hawkins et al.
US-6014694	01-2000	Aharoni et al.
US-6351471	02-2002	Robinett et al.
US-5461679	10-1995	Normile et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600